Title: System and Method for Providing Event Hysteresis in Network Management Systems

Amendments to the Claims

1. (Currently amended) A method of managing an event toggling between first and second event states in a network management system, said method comprising:

listing said event and a last state change time of said event in a hysteresis table, if said event is not already listed in said hysteresis table;

determining if said event maintains one of said first and second states for a predetermined amount of time, wherein:

amount of time is not less than current time, then said event is
deemed unstable and remains listed in said hysteresis table; and
if said last state change time plus said predetermined amount of time is
less than the current time, then said event is deemed stable and
is removed from said hysteresis table; and

reporting said event as having one of said first and second states only after said one of said first and second states is maintained for said predetermined amount of time, wherein said reporting said event as having said one of said first and second states comprises reporting said event as achieving said one of said first and second states at the actual time of occurrence of asaid last state change time of said event.

- 2. (Original) A method according to claim 1, wherein said event is an alarm.
- 3. (Original) A method according to claim 2, wherein said first state is an alarm set state, and said second state is an alarm clear state.
 - 4. (Cancelled)
- 5. (Original) A method according to claim 1, said method further comprising reporting a number of times said event toggled between said first and second states.

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6. (Cancelled)

- 7. (Original) A method according to claim 1, said method further comprising reporting said event as being in a toggling condition.
- 8. (Original) A method according to claim 1, said method further comprising reporting said event as not being in a toggling condition.
- 9. (Currently amended) A method of managing an event toggling between first and second event states in a network management system, said method comprising:

listing said event and a last state change time of said event in a hysteresis table, if said event is not already listed in said hysteresis table;

reporting said event as having said first state;

monitoring said event to determine if said event maintains said second state for a predetermined amount of time, wherein:

amount of time is not less than current time, then said event is
deemed unstable and remains listed in said hysteresis table; and
if said last state change time plus said predetermined amount of time is
less than the current time, then said event is deemed stable and
is removed from said hysteresis table; and

reporting said event as having said second state only after said second state is maintained for said predetermined amount of time, wherein said reporting said event as having said second state comprises reporting said event has achieving said second state at the actual time of occurrence of asaid last state change time of said event.

- 10. (Original) A method according to claim 9, wherein said event is an alarm.
- 11. (Original) A method according to claim 10, wherein said first state is an alarm set state, and said second state is an alarm clear state.

AMENDMENT AFTER FINAL OFFICE ACTION

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- 12. (Cancelled).
- 13. (Original) A method according to claim 9, said method further comprising reporting said number of times said event toggled between said first and second states.
 - 14. (Cancelled).
- 15. (Original) A method according to claim 9, said method further comprising reporting said event as being in a toggling condition.
- 16. (Original) A method according to claim 9, said method further comprising reporting said event as not being in a toggling condition.
- 17. (Currently amended) A machine-readable medium whose contents cause a network management system to perform a method of managing an event toggling between first and second event states, said method comprising:

listing said event and a last state change time of said event in a hysteresis table, if said event is not already listed in said hysteresis table;

determining if said event maintains one of said first and second states for a predetermined amount of time, wherein:

amount of time is not less than current time, then said event is
deemed unstable and remains listed in said hysteresis table; and
if said last state change time plus said predetermined amount of time is
less than the current time, then said event is deemed stable and
is removed from said hysteresis table; and

reporting said event as having one of said first and second states only after said one of said first and second states is maintained for said predetermined amount of time, wherein said reporting said event as having said one of said first and second states comprises reporting said event as achieving said one of

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said first and second states at the actual time of occurrence of asaid last state change time of said event.

- 18. (Original) The machine readable medium of claim 17, wherein said event is an alarm.
- 19. (Original) The machine readable medium of claim 18, wherein said first state is an alarm set state, and said second state is an alarm clear state.
 - 20. (Cancelled).
- 21. (Original) The machine readable medium of claim 17, said method further comprising reporting a number of times said event toggles between said first and second states.
 - 22. (Cancelled).
- 23. (Original) The machine readable medium of claim 17, said method further comprising reporting said event as being in a toggling condition.
- 24. (Original) The machine readable medium of claim 17, said method further comprising reporting said event as not being in a toggling condition.
 - 25. (Currently amended) A network management system comprising: a machine-readable medium whose contents cause said system to perform a method of managing an event toggling between first and second event states, the method comprising:
 - listing said event and a last state change time of said event in a hysteresis table, if said event is not already listed in said hysteresis table;
 - determining if said event maintains one of said first and second states for a predetermined amount of time, wherein:

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if said last state change time of said event plus said predetermined

amount of time is not less than current time, then said event

is deemed unstable and remains listed in said hysteresis
table; and

if said last state change time plus said predetermined amount of time
is less than the current time, then said event is deemed stable
and is removed from said hysteresis table; and

reporting said event as having one of said first and second states only after said one of said first and second states is maintained for said predetermined amount of time, wherein said reporting said event as having said one of said first and second states comprises reporting said event as achieving said one of said first and second states at the actual time of occurrence of asaid last state change time of said event.

- 26. (Original) The system of claim 25, wherein said event is an alarm.
- 27. (Original) The system of claim 26, wherein said first state is an alarm set state, and said second state is an alarm clear state.
 - 28. (Cancelled).
- 29. (Original) The system of claim 25, said method further comprising reporting said number of times said event toggled between said first and second states.
 - 30. (Cancelled).
- 31. (Original) The system of claim 25, said method further comprising reporting said event as being in a toggling condition.
- 32. (Original) The system of claim 25, said method further comprising reporting said event as not being in a toggling condition.

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33. (Currently amended) An optical communication system comprising:

- at least one transmitter for transmitting an optical signal to a receiver through an optical information channel, at least one of said transmitter, said receiver and said optical information channel comprising at least one apparatus for reporting an event; and
- a network management system coupled to the optical communication system for receiving said report of said event, said network management system comprising a machine-readable medium whose contents cause said network management system to perform a method of managing an event toggling between first and second event states, the method comprising:
 - listing said event and a last state change time of said event in a hysteresis table, if said event is not already listed in said hysteresis table;
 - determining if said event maintains one of a first and a second state for a predetermined amount of time, wherein:
 - if said last state change time of said event plus said predetermined

 amount of time is not less than current time, then said event

 is deemed unstable and remains listed in said hysteresis
 table; and
 - if said last state change time plus said predetermined amount of time
 is less than the current time, then said event is deemed stable
 and is removed from said hysteresis table; and
 - reporting said event as having one of said first and second states only after said one of said first and second states is maintained for said predetermined amount of time, wherein said reporting said event as having said one of said first and second states comprises reporting said event as achieving said one of said first and second states at the actual time of occurrence of a said last state change time of said event.

- 34. (Original) The system of claim 33, wherein said event is an alarm.
- 35. (Original) The system of claim 34, wherein said first state is an alarm set state, and said second state is an alarm clear state.
 - 36. (Cancelled).
- 37. (Original) The system of claim 33, said method further comprising reporting a number of times said event toggled between said first and second states.
 - 38. (Cancelled).
- 39. (Original) The system of claim 33, said method further comprising reporting said event as being in a toggling condition.
- 40. (Original) The system of claim 33, said method further comprising reporting said event as not being in a toggling condition.
- 41. (New) A method according to claim 1, further comprising sending a set notification prior to said reporting, and said reporting consists of sending a clear notification.
- 42. (New) A method according to claim 1, wherein said hysteresis table includes a plurality of events and corresponding last state change times, and said determining is repeated periodically to remove stable events from said hysteresis table.
- 43. (New) A method according to claim 9, further comprising sending a set notification prior to said reporting, and said reporting consists of sending a clear notification.
- 44. (New) A method according to claim 9, wherein said hysteresis table includes a plurality of events and corresponding last state change times, and said determining is repeated periodically to remove stable events from said hysteresis table.

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45. (New) The machine readable medium of claim 17, further comprising sending a set notification prior to said reporting, and said reporting consists of sending a clear notification.

- 46. (New) The machine readable medium of claim 17, wherein said hysteresis table includes a plurality of events and corresponding last state change times, and said determining is repeated periodically to remove stable events from said hysteresis table.
- 47. (New) The system of claim 25, further comprising sending a set notification prior to said reporting, and said reporting consists of sending a clear notification.
- 48. (New) The system of claim 25, wherein said hysteresis table includes a plurality of events and corresponding last state change times, and said determining is repeated periodically to remove stable events from said hysteresis table.
- 49. (New) The system of claim 33, further comprising sending a set notification prior to said reporting, and said reporting consists of sending a clear notification.
- 50. (New) The system of claim 33, wherein said hysteresis table includes a plurality of events and corresponding last state change times, and said determining is repeated periodically to remove stable events from said hysteresis table.